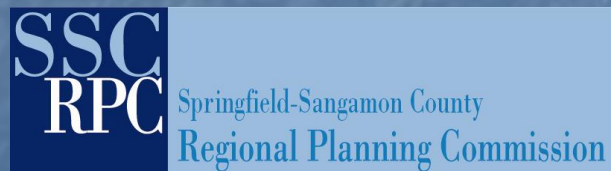


# Wind Energy Conversion Systems

## **Sangamon County Zoning Requirements**

(Ch. 17.49 – Res. 11-1, 08-08-06)



# Origin of the Ordinance

- Expectation of demand.
- Allow development of systems while protecting public interest.
- “Scaling” not a solution.
- Size and use differences:
  - Mini
  - Small
  - Large

# Development of Ordinance

- Model State Ordinances:
  - Ex.: Illinois, Wisconsin, Minnesota, Michigan.
- Ordinances of Other Municipalities.
- Recommendations from Industry and Other Municipalities.
- Previous Concerns Identified in Research.

# Major Steps in Process

- Approval of **Petition for Zoning**.
- Approval of **Certificate of Compliance** (associated with site plan and other reviews).
- Approval of **Building Permit**.

This is similar to other development.

# Zoning Requirements for Wind Energy Conversion Systems (WECS) – Large Systems

## **WECS may be allowed:**

- As a Conditional Permitted Use (CPU); **and**
- In the "A" Agriculture Zoning District; **and**
- On a Single Parcel of Land Totaling 40 acres or more; **or**
- Contiguous Parcels Totaling 40 acres or more.

# Conditions for CPU

- **Public Hearing.**
- **Standards for Granting:**
  - The proposed location, design and method of operation will minimize adjacent effects on character of surrounding area;
  - Will not cause substantial injury to value of other property in the vicinity;
  - For WECS, meets incorporated area and contiguous urban development area setbacks.
- **Additional restrictions could be required.**

# Petition Requirements

- **A written summary of the project (project scope and applicant experience):**
  - Description and generating capacity;
  - Manufacturer(s) and type(s);
  - Number of towers and capacity;
  - System height;
  - Diameter of rotor(s);
  - Description of applicant, owner and operator, and previous WECS experience.

# Additional Petition Requirements

## ■ **A site plan showing:**

- Boundaries of the project;
- Location of each tower, guy lines and anchor bases;
- All WECS structures, including but not limited to, project and interconnect substations;
- Location and voltage of any overhead transmission lines;
- Property lines;
- Setback lines;
- Public access roads;
- Location of all existing structures and their identified uses;
- Land use, zoning, public roads and structures within 1000 feet of the WECS site.

# Special **Site** Requirements

- **Location:** Not within 1 ½ miles of incorporated area of 10,000; ½ mile of less than 10,000; not so as to interfere with contiguous urban development.
- **Height:** Must meet FAA or other state/federal laws.
- **Setbacks:**
  - Perimeter: 1,200'. Setback easement allowed.
  - Principal structures: 1,000' or 3 times rotor diameter, whichever is greater.
  - Third party utility lines: 1.1 times system height.
  - Public road: 1.1 times system height.

# Additional **Design** Requirements

- **Noise:** Not exceed standards set by Illinois Pollution Control Board (Class C to Class A land, regardless of land use). Shall be enforced.
- **Equipment Certification:** Conformance with industry ANSI standards; Certificate of design compliance with Underwriter Laboratories (UL), DNV, GL, or equivalent.
- **Appearance:** Non-reflective, unobtrusive color; no advertising signs or graphic designs.
- **Lighting:** Only lighting required by FAA or other state/federal law.

# Additional **Safety** Requirements

- Wiring between turbines and substations underground whenever possible;
- Not climbable up to 15';
- All access doors and equipment lockable;
- Warning signs;
- Redundant breaking system.

# Other Requirements

- **Electromagnetic Interference:**
  - Not installed if interference would result, or block microwave link.
  - Provide summary and site plan to providers.
  - Mitigation required.
- **Shadow Flicker:**
  - Study.
  - Identify problem areas [more than 1 hr./yr. for residences and other existing uses] and on roads.
  - Any safety problems must be eliminated or mitigated.
- **Decommissioning Plan.**

# Use of Public Roads

- Must identify all public roads to be used.
- Must conduct a pre-construction baseline survey.
- Provide financial security to cover repairs.

# Certificate of Compliance Submission Requirements

- Site Plan, with **additional** items.
- **Noise assessment** (perimeter property lines & housing units.)
- **Avian screening report** by 3<sup>rd</sup> Party (IDNR and US Fish and Wildlife correspondence.)
- **FAA compliance** report.
- **IHPA compliance** report.
- **Emergency plan.**
- All other required studies and reports demonstrating compliance.

# Certificate Review

- **Certificate of Compliance Review by:**
  - Dept. of Zoning & Building Safety.
  - Regional Planning Commission.
  - County Engineer.
  - Emergency Telephone System Dept.
  - County Administrator.
  - County State's Attorney.
  - Applicable fire protection district.
- If committee of above approve, Zoning Administrator shall issue Certificate of Compliance.
- Building permit may be reviewed at same time.

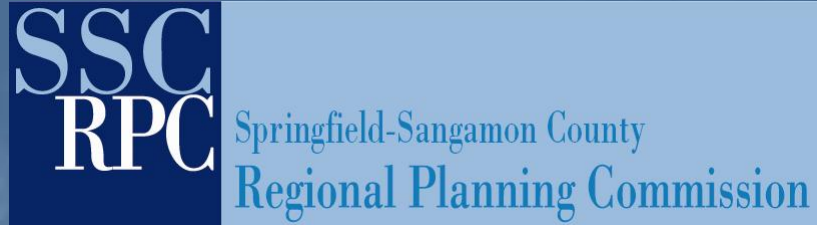
# Other Areas Addressed

- Cessation of Operations:
  - Not in operation and producing electricity for 270 consecutive days, it must be removed.
  - Notification by Zoning Administrator, with 30 days for response.
  - Lack of compliance is a violation submitted to States Attorney for enforcement.
- Penalties.

# Prior to Any Final Action The Process Requires

- A number of detailed plans and studies.
- Multiple reviews of the project and its plans.
- Several securities.
- Public hearing.

This is likely to be a lengthy process.



## **INFORMATION SOURCES ON WIND ENERGY**

**[WWW.SSCRPC.COM](http://WWW.SSCRPC.COM)**

**Center for Renewable Energy, ISU:  
[www.renewableenergy.ilstu.edu](http://www.renewableenergy.ilstu.edu)**

**Institute of Rural Affairs, WIU:  
[www.illinoiswind.org](http://www.illinoiswind.org)**